Reporting Federal Activities . . .

Higher Education

Features for APRIL 1962

Project English: Its Implications for Colleges and Universities

J. N. HOOK

Partners in Public Service

JOHN W. MACY, JR.

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
Office of Education

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

HIGHER EDUCATION
Vol. XVIII, No. 6

Reporting Federal activities in higher education

Published nine times a year. Printing approved, Bureau of the Budget, August 30, 1960.

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Subscription: in advance, $1.25 a year (single copy, 20 cents), to foreign countries, $1.75. For orders of 100 copies or more in bulk to one address in the United States, 25 percent discount is allowed. Send remittance to Superintendent of Documents, Government Printing Office, Washington 25, D.C.

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Project English: Its Implications for Colleges and Universities

By J. N. HOOK*

THE National Interest and the Teaching of English, published in 1961 by the National Council of Teachers of English, spells out in detail not only the importance of English to the Nation's well-being but also the grave but remediable deficiencies that now exist. Among the deficiencies are: Too many inadequately prepared teachers now in the classrooms; too small a number of qualified new teachers being graduated each year; a lack of focus, in many English classrooms, upon sequential study of language, literature, and composition; too little articulation of the teaching of English from the elementary school through the college; the slightness of the attempts to coordinate national, State, and local efforts to improve the teaching of English; and the lack of answers to many basic questions about materials and methods—questions that research can answer. "If the teaching of English is to be improved throughout the country," says this report, "bold and immediate action must be undertaken on a national scale."

Project English, now in its beginnings, is intended by the Office of Education to correct a number of these deficiencies. It will supplement work already underway in various quarters to improve the teaching and learning of English in the Nation's elementary and secondary schools, colleges, and universities. Many studies and experiments are going forward in colleges, universities, local school districts, State departments of education, and professional organizations—so many, in fact, that one of the probable tasks of Project English will be to serve as a clearinghouse and disseminator of information. But, despite these studies and experiments, many of which are broadly significant, a systematic attack upon the whole vast problem of English instruction can hardly be hoped for except on the national level.

In his message to Congress concerning education, on February 6, 1962, President Kennedy said: "The control and operation of education in America must remain the responsibility of State and local governments and private institutions. * * * But the Congress has long recognized the responsibility of the Nation as a whole—that additional resources, meaningful encouragement, and vigorous leadership must be added to the total effort by the Federal Government if we are to meet the task before us. For education in this country is the right, the necessity, and the responsibility of all. Its advancement is essential to national objectives and dependent on the greater financial resources available at the national level."

Sterling M. McMurrin, U.S. Commissioner of Education, has spoken often of the necessity for improved teaching and learning of English and has stressed the role of the Office in sponsoring research and disseminating information, without any desire or attempt on the part of the Office to create a national curriculum.

The Office of Education is now making long-range plans for Project English in consultation with representatives of such organizations or groups as the Modern Language Association, the College English Association, the National Council of Teachers of English, organizations of principals, administrators, supervisors, and librarians, the Commission on English of the College Entrance Examination Board, and State educational agencies. The extent to which the plans become realities is contingent upon legislative action. The Congress has allocated limited funds to the project for fiscal year 1962. These are being expended on three undertakings:

1. *Curriculum study centers.*—These centers will span several grade levels and each is designed to operate for approximately 5 years. They are intended to develop sound patterns for sequential teaching of skills and content in reading worthwhile materials, in language, and in composition, the sequence being based upon both the subject matter

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and what is known about child growth and development. The centers will test promising practices and materials, make recommendations concerning curriculum, and develop materials adaptable to systematic school and lower year college programs of instruction. The centers are to be funded jointly by the Office and sponsoring colleges, universities, or State departments of education. (See English Centers Established, p. 22)

2. *Basic and applied research studies.*—Through colleges, universities or State educational agencies, individuals or groups may present proposals for research that show promise of contributing to the improvement of instruction in English on any level. A number of such proposals have already been approved by the Cooperative Research Advisory Committee. Under the law, the committee must evaluate and pass upon requests for centers, research studies, or conferences before any concrete action is taken. Proposals that are most likely to be accepted are those that show promise of improving instruction at any academic level.

3. *Research planning and development.*—Conferences or seminars dealing with needed research in teaching English are arranged through requests submitted by responsible officers of colleges, universities, or State educational agencies.

A number of activities already in progress in or sponsored by the Office of Education will feed results into Project English. Among the many that could be mentioned are studies of reading and summaries of research in reading on the elementary and secondary levels, a detailed analysis of the characteristics of the academically able and a wider study measuring levels of talent of all sorts, a study of curricular offerings and patterns in English and other subjects in colleges and universities, and a clearinghouse of research in higher education.

How Higher Education Is Involved

Increasingly during the past few years, professors in academic departments have come to realize that they are deeply responsible not only for the quality of students who go out of their classrooms but also for the quality of those who come in.

Professors teach the teachers, today's and tomorrow's teachers, teachers not only in colleges and universities but also in elementary and secondary schools. Through the content of their courses and also through their attitudes and their awareness, or lack of awareness, of their contribution to American education, professors affect what is placed in the curriculum and what is done with it.

Through their research, too, professors contribute to instruction in the lower schools. Almost any type of research may have its impact, whether it reveals a better way to teach Dickens or clarifies the auditory imagery in *Bleak House*. A college or university department should be catholic enough to attract—and to respect and reward impartially—those interested in the most esoteric of scholarly problems and those especially concerned with the curriculums of the lower schools. And it should refrain from sealing them off in separate compartments, for each may learn from the other.

It is the hope of Project English that many members of college and university departments of English will become concerned in improving the teaching of their subject on other levels, if for no other reason than that the students who come to them will then be better prepared. Their contributions are vital. They cannot do the job alone, but neither can their colleagues in education and psychology. If some of today's teachers are badly prepared in either knowledge of content or knowledge of educational principles and techniques, it is because too little cooperation has existed between teachers of the subject itself and teachers of education and psychology. The Teacher Education and Professional Standards Conferences have made plain not only that such cooperation is possible but that many leaders of higher education realize it to be imperative.

How can departments of English and departments or schools of education cooperate? What can departments of English do to help improve instruction?

Let me be as specific as it is possible to be at a time when the future outlines of Project English are still being developed. I shall describe several potential lines of action, some of them similar to those already being followed, under various auspices, in foreign languages, mathematics, and science; and I shall attempt to show some of the ways in which higher education, particularly departments of English and departments or schools of education, may be involved. Some of these potentialities may not become realities; others may materialize at once.

Institutes

The foreign language program in its first years conducted a small number of institutes to instruct teachers in the use of new methods and materials.

In 1962, 85 such institutes will be held, to be staffed by about 400 college faculty persons and to be attended by about 4,500 elementary or secondary teachers.

Bills now being considered by Congress would authorize similar institutes for English. The Nation has approximately 800,000 elementary teachers (almost all of whom teach the "language arts" throughout the schoolday) and 80,000 to 90,000 teachers of secondary English. Not all of these teachers would be interested in or have need for the kind of help that institutes offer. But if only 10 percent of the elementary and 25 percent of the secondary teachers enrolled in these institutes in the next 5 years, colleges and universities would have to provide summer faculty to teach approximately 100,000 additional persons on the graduate or near-graduate level.

What is taught in an institute? It is impossible to say precisely. The Commission on English of the College Entrance Examination Board stresses a "tripod" of language, literature, and composition in the 20 institutes it is sponsoring for 1962. Institutes proposed by the Office of Education for secondary school teachers of students of mixed ability or of the non-college-bound will no doubt also emphasize the tripod, but may perhaps depart in some respects from the commission's pattern.

Institutes for elementary teachers must certainly cover reading, penmanship, spelling, composition, and the relationships of these to children's varying rates of development. But they cannot ignore scholars' discoveries of new truths about language and the discrediting of old fallacies or half-truths; they cannot ignore the fact that basic principles of organization can be taught to young children; they cannot ignore the possibility that some or even most children can learn to read richer fare than they are sometimes offered.

Evening or Saturday seminars or courses

At present a fairly large number of elementary and secondary teachers who live within 50 miles or so of a college campus enroll in evening or Saturday classes to improve their teaching qualifications. If within the next few years Federal support is offered, the number may substantially increase.

In English and perhaps in some other subjects a problem exists here—a problem that will have to be resolved by consensus of colleges and local school boards or State agencies. Often an elementary or secondary teacher desperately needs more work in English but is not qualified for graduate-level courses. Since his school board wants him to earn graduate credits, he bypasses the English that he needs and wants, and enrolls in a graduate course in another discipline for which he happens to have the prerequisite. Obviously departments of English cannot legitimately dilute their graduate courses for such teachers, but they can use whatever influence they have with school boards to permit inservice credits and salary increments for teachers who enroll in the advanced undergraduate courses they would find most beneficial. Further, English departments can offer teachers in their geographical areas more of the undergraduate and graduate evening or Saturday courses they need. In some institutions the need for new or revised courses may become evident.

Fellowships and other assistance

Financial assistance available to graduate students of English has, over the years, been limited. Except for the National Defense Graduate Fellowship Program, which supports students in all basic academic fields, the Federal Government has given almost all its fellowship support to graduate students in the sciences, engineering, and public health, and of the 5,500 NDEA fellowships thus far awarded only 324 have gone to students of English or linguistics. Institutional fellowships for students of English have also been meager. In 1955–56, for example, institutions awarded only 900 fellowships, out of a total of 24,277, to students studying English. To encourage more students to prepare for teaching English in the schools or colleges, we shall need to do a great deal more to help them financially in their graduate work.

As to programs for improving the qualifications of teachers already at work in the elementary and secondary schools, the Federal Government has limited its support almost wholly to teachers of science, mathematics, engineering, modern foreign languages, and counseling and guidance. Institutes for English teachers were proposed as an amendment to the National Defense Education Act during the last session of Congress, but no action was taken. Although the Commission on English of the College Entrance Examination Board is providing $1 million for 20 institutes to be conducted this summer, there are no plans to repeat these

institutes. Improvement of the qualifications of teachers now in the schools is a major problem, and programs must be developed to solve them.

Programs in teacher education

Surveys by the National Council of Teachers of English, notably those reported in 1961 in *The National Interest and the Teaching of English*, reveal wide diversity in programs for preparing elementary teachers and secondary teachers of English. Because of differing requirements for certification, some diversity is to be expected. More serious are such facts as these:

For prospective elementary teachers:

- Over 50 percent of the colleges require no more than 6 semester hours of English beyond the freshman year; some colleges require no English whatever after the freshman year.
- Only 5.3 percent of the colleges require work in the history and structure of the English language.
- Only 30.6 percent require a course in American literature.
- Only 11.2 percent require a course in oral interpretation of literature.

For prospective secondary teachers of English:

- Only 17.4 percent of the colleges require a course in modern English grammar.
- Only 41 percent require a course in advanced composition.
- Only 21.1 percent require a course in contemporary literature, 29.1 percent a course in literary criticism or critical analysis, and 38.8 percent a course in a literary genre or genres.

Obviously, considerable strengthening of programs for preparing teachers is needed in many colleges and universities. Project English is proposing a weeklong conference on such programs as well as the establishment of a few pilot programs. But long before results from a conference or from pilot programs could become available, committees of English and education faculty members in any college or university could examine its teacher preparation program and plug some holes.

Two other needs of national dimensions must be mentioned. On the one hand, for the liberal arts graduates who majored in English but did not earn teaching certificates, expanded master of arts in teaching programs should be made available. On the other, the newly certified teachers who discover, in the June before they begin teaching, that they lack desirable work in such subjects as linguistics, literary criticism, or advanced composition should be encouraged to fill these gaps.

Special contributions of individual scholars

In the new programs in science, mathematics, and foreign languages, eminent scholars at the growing edge of each subject have turned at least a portion of their attention to the teaching of their subject at less advanced levels. Because of the depth and often the breadth of their knowledge, they are contributing to instructional materials and procedures a quality otherwise unattainable. Working with experts in child growth and development, they have given to students information and insights never before possible. But few scholars in English have shown an eagerness to be involved in such work.

It is, however, not solely the national participation of a few dozen scholars that is needed. Within his own geographical area any levelheaded scholar can exert a wholesome influence. The first step will be to sit quietly as a visitor in a number of elementary and secondary classrooms, to observe and think about what goes on and why, and to note the varied characteristics of the pupils (not all of whom have the hereditary and cultural advantages of the professor's own children). The second step must be taken with great tact. The professor must not be a faultfinder, or pose as a person who knows all the answers or as one qualified to reform the curriculum. But he may ask in honest humility and honest pride whether there is any way in which he and perhaps some of his colleagues may assist in working toward solutions of some of the problems facing the schools. The answers may be slow in coming. The idea of such cooperation is so new in some places that it shocks. But gradually such possibilities as these will evolve: "Can you meet with our teachers and show them what the 'new grammar' is about? What does modern literary criticism have to offer high school teachers? What's new in the 18th century? Can somebody tell us about the possibilities of programed instruction in English? How can we convince the non-English teachers that they have some responsibilities for encouraging linguistic decency? Can college professors help to show the community that it is impossible to teach writing well when a teacher has 175 students a day?" No Federal support, no Project English, is needed to ac-

complish what is urged here. Only good will, commonsense, and a few days' delay in the newest interpretation of *Moby Dick* are required. However, the presence of scholars who have worked with lower schools will make possible greater and more intelligent departmental involvement in institutes, research studies, and the like.

Scholars may help too in the recruitment of promising young students as teachers of English. The shortage of qualified teachers threatens to become as acute in the colleges as on the other levels. The American Mathematics Association has a program involving a number of scholars in mathematics who visit various campuses to acquaint students with the exciting world of mathematics and with opportunities in teaching that subject. Departments of English might well emulate that program in an attempt to lead more young people into the exciting world of English.

A special Ph. D. in English

Two types of key positions have now often to be filled with inadequately prepared persons. One is the job of the teacher of methods—a word which people in academic departments regard with less horror as they become more knowledgeable about elementary and secondary schools. The other is that of supervisor of English teaching in large city or county school systems; the person in this position exerts great influence upon the curriculum and therefore upon the amount and quality of knowledge and skill that high school graduates possess. Both these positions require, or should require, teaching experience in the lower schools and a solid grounding in both subject matter and educational principles. A second-track (not second-rate!) Ph. D. program in English, preserving the traditional values and rigors of the degree but admitting the need for professional skills and knowledge as well, would enable students to qualify for both these types of positions and would thereby become a major contribution of a few large and respected universities.

Refresher seminars for college teachers

The libraries, the journals, and the meetings of professional and scholarly organizations provide opportunity for college teachers to inform themselves about what their colleagues in other colleges and universities are thinking and doing. But something more is needed: A longer, more direct, and more unhurried opportunity to exchange ideas and information, to validate or invalidate a hypothesis, to talk with others who face similar tasks in teaching and in research, to be gently guided again for a while by a wise master. A number of short seminars on various campuses, perhaps sandwiched between summer school and the fall term, could do much to make teaching and research more productive.

Using new media of instruction

New media of instruction are here, whether we like them or not, and they cannot be quietly dismissed. Educational television, teaching machines and the programs fed into those machines, scrambled textbooks, English language laboratories, team teaching, and their descendants or cousins still beyond the grayish-blue horizon may lead us either into educational caverns measureless to man—or up to peaks in Darien.

If English departments, however, do not contribute substantially to what goes into the teaching machines, the language laboratories, and so on, they will not be very happy with what comes out. Educational psychologists may know the answers to questions about stimuli, responses, and reinforcements, but very likely they know comparatively little about sentence modifiers, plus-junctures, or "Andrea del Sarto." Cooperative research by subject-matter experts, psychologists, and technicians is essential if the brave new world is to have people in it as well as machines.

The list could go on. Project English is at the beginning of what may be a long road with many turnings. It is not just a project that will help elementary schools to teach the spelling of "cat" more systematically, nor just a project that will help the high schools to decide whether and why and when "The Rime of the Ancient Mariner" should be taught.

Rather, it is a project that must dig deeply into the usual assumptions of some of us. It must answer questions that are now unanswerable. It must correlate knowledge that is not now correlated. It must disseminate knowledge. It must build an awareness that elementary, secondary, and college teachers are working together toward the same goal: An enlightened people who can interpret well the spoken and the written word, think straight, express themselves coherently, and absorb many human truths that literature reveals.

Partners in Public Service

BY JOHN W. MACY, JR.

SINCE my return to Government service last year, I have been playing a jetborne Paul Revere role in behalf of the career civil service before a variety of groups representing a broad cross section of our society. In carrying my message to the country, I have played variations on a theme, but essentially my message to all groups has been this:

> The Nation must be sure that it can recruit, develop, and maintain a high-caliber corps of career civil servants capable of measuring up to the complex and vital responsibilities that these critical times have placed upon Government. In the attainment of this important national goal every citizen has a stake.

In my efforts to mobilize support, I have made a special effort to sound the alarm to educators because of their strategic position and of the contribution they can make to the solution of our problems. And I have reason to believe they are responding to it.

For example, last spring I addressed a "Federal Career Outlook Letter" to university and college presidents and to heads of schools and departments, requesting their cooperation in making promising students aware of Government as a potential employer and of the wide range of interesting career opportunities available in the Federal service. I cannot say with certainty how far educators' response to my letter was a factor in students' response to our recruiting efforts, but statistics show that they were more successful this year than ever before.

Last fall we made considerable progress in increasing college-Federal cooperation in furthering the development of civil service executives at the midpoint or later in their careers. In response to our invitation to explore with us the possibilities for strengthening college and Government relationships in the training and development of Federal executives, more than 30 leaders in education, business, Government, and the foundations participated in a 3-day conference at Princeton University. I am very much more encouraged by the spirit and the promise of that meeting.

The significance and potential of the conference were highlighted in President Kennedy's message to the participants:

"Your deliberations over the next several days are of great importance to me.

"The open society we cherish works only because we have the talent for consultation among free and independent elements of it—talent for the re-creation of new constructive relationships among its parts to cope with changing national problems. Innovation comes from the voluntary meshing of our diverse and autonomous institutions.

"The institutions in which you have leadership responsibilities—the universities, foundations, business, and Government—have this in common: An awareness of the inescapable necessity to improve the competence of our upper level Federal career executives. My lifetime association with public servants has impressed upon me that they are generally competent for today's task, but a new world is upon us. Public problems of the nation and the world insist upon a quickened pace and a new set of abilities to act intelligently on enormously complex matters.

"We all respect the traditions of the free university and are devoted to their survival and growth. Your willingness to examine with a fresh eye the new contributions universities may make toward raising the caliber of the public interest has great promise. I am looking forward to reviewing your recommendations.

"I wish you a most successful conference."

I was pleased to be able to report to the President on the success of the conference in sharpening the participants' perception of training needs in Government, in presenting challenges to universities to experiment with new ideas and programs for public leadership, in stimulating foundation interest in supporting studies and programs, and in developing consensus on several concrete things to be done. As a result, action is being planned or taken on a pro-

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This is the second of two articles which Mr. Macy, who is chairman of the U.S. Civil Service Commission, has contributed to *Higher Education*. The first, "University-Federal Cooperation," appeared in the January-February 1962 issue.

gram of career education awards, on the development of a clearinghouse between universities and Federal agencies, on the organization of additional meetings in other parts of the country, and on the establishment of a national center for executive studies.

The need for such programs in the development of career executives is urgent. Senator Henry M. Jackson underscored this need in his recent final statement on his subcommittee's 2-year study of our organization for national security. "Free men are locked in a struggle being waged on the earth's continents, in the depths of its seas, and in the reaches of space," he declared. "The question is this: Can free societies outplan, outperform, outlast—and if need be, outsacrifice—totalitarian systems? Can we recognize fresh problems in a changing world—and respond in time with new plans for meeting them?

"Our career services are not producing enough officials with the large executive talents, the breadth of experience, and the width of perspective needed in top foreign policy and defense posts," he warned. "A program for improvement should give officials of exceptional promise much greater flexibility and latitude in job assignments; it should stress movement of personnel between agencies; it should offer more opportunities for advanced training of the kind made available by our most efficient private corporations."

But the requirement for top talent is not limited to the area of national security; it is present throughout the whole complex of the responsibilities of modern government.

Today the United States is faced with a challenge of change without precedent in its history. The slow evolutionary pace of the past has been disrupted by the pressure of revolutionary forces which can neither be ignored nor be checked. These forces, affecting technological, economic, and social progress, involve the fate of this Nation with that of other nations the world over as never before in peacetime, and perhaps not even in wartime. A vast range of new issues demands new vitality of leadership in public administration. Critical problems of enormous scope now confront our Government, problems produced by the competitive forces of world communism from without and by the forces of dynamic change from within. Integrity, high competence, and dedication to the public interest have always been regarded as necessary qualities of public service; but to these must now be added the qualities of creativity, imagination, and innovation. The public service no longer has time to catch up, at its own pace, with the forces of change; it must anticipate today the challenges of tomorrow. We cannot afford passively to await the appearance of additional and more complex problems. As General Gavin says in his provocative book *War and Peace in the Space Age:* "In combat, one's very survival depends upon one's ability to anticipate events. And, as with an individual, so the life of a nation depends upon its ability to foresee the challenge of the future."

In every Government action the Federal career service must play a vital role. This responsibility should not be entrusted to any but highly qualified, loyal, and dedicated men and women. But to attract and to retain enough high-caliber people in a wide range of occupations is a task of major proportions.

The Federal Government is by far the Nation's biggest employer, with a work force of some 2,400,000 civilian workers. They staff some 80 departments and agencies and are engaged in about 1,500 different occupations, representing nearly every kind of work to be found in private employment as well as some found in Government alone.

Some idea of the Government's manpower needs can be obtained from the fact that more than 20,000 employees are at work at the professional level in the physical sciences, 21,000 in the biological sciences, and over 60,000 in engineering. The Government also employs 12,000 people in the social sciences, nearly 40,000 in medicine and allied fields, over 14,000 in education, and 28,000 in accounting and budget work.

Federal employees today are plumbing the oceans and exploring outer space. They are conducting cancer research and developing new techniques in scientific farming. They are improving flight safety by technology and the enforcement of regulations. They are ushering in the era of space communications and designing improved weapons for our defense. Through the years their work has added greatly to man's knowledge in almost every field of science, and contributed immeasurably to our health and welfare.

For example, career scientists in Government developed radar and sonar, the first fully automated electronic digital computer, the instrument landing system used by all commercial and military aircraft, electronic microminiaturization, and the proximity fuze, and determined the atomic weight of hydrogen.

A Government scientist "put radio in the American home" with the development of the AC radio, and another developed the deadly air-to-air Sidewinder missile. A team of career scientists developed the first radio direction finder in World War I and the first successful guided missile in World War II. And a career physicist was responsible for the long-range missile detection system on which we depend for almost instantaneous warning of an attack by an aggressor.

In the light of its many obvious attractions, why should Government have difficulty in recruiting and keeping the talent it needs?

There are several related reasons.

The sheer size of the job is one. Just to fill recruiting needs resulting from normal turnover—retirements, deaths, separations, resignations—the Government must hire about 300,000 employees each year. Of this number, about 20,000 are sought from among new college graduates to fill beginning professional positions in a wide range of occupations.

Related to the quantity needed is the very real competition the Federal service faces in seeking a share of the available talent on the campus. In our free society, Government cannot "draft" the civilian talent it requires; it must win its share in the marketplace against the attractions of other bidders. And here we are faced with an increasing shortage of top talent and a greater demand by potential employers for scarce skills. Studies by the Department of Labor forecast that this supply-demand picture will get darker during this decade. Linked to these reasons is the fact that the rates of pay offered by private employers generally are more generous than those offered by the Federal Government.

Finally, and perhaps of overriding importance, there is the difficulty of communicating to college students factual information about the career civil service—the challenging career opportunities and many advantages it offers and its need for high-caliber people. The seriousness of this lack of factual information is pointed up by preliminary reports on the Brookings Institution's survey of "Occupational Values and the Image of the Federal Public Service."

The survey shows that the public's image of the public service leaves much to be desired and that it bears little relation to the real Federal career service. By and large, the citizen's view of the civil service is of an army of clerks doing routine work, people who chose careers in Government because of the security it offered or because they "couldn't make the grade" elsewhere. Most respondents thought that they would feel downgraded if they moved from their present employment to the same line of work in Government.

Among the findings of the Brookings survey is one that merits the special attention of educators. It is this: Youngsters in high school who participated in the survey have a much more favorable attitude toward Federal service than juniors and seniors in college; and there is a relationship between the opinions of students and those of their instructors at these levels, that is, high school teachers have a somewhat more favorable attitude toward the civil service than college instructors have.

Undoubtedly there are other factors in such a shift in student opinions between high school and college, but even the most modest of educators would have to concede that teachers have much to do with shaping the views of their students, and there is substantial evidence that they exert a powerful influence on career decisions of students.

It is not my purpose here to examine the reasons why educators may hold dim views of the civil service or why some of them may cause students to acquire a distorted image of Government work and workers, but I would hope that any who do so would be certain that their views of the Federal service are justified by the "world as it is, not as it is in their minds." Anyone who thoughtlessly subscribes to and gives currency to outdated stereotypes of civil service works against his own best interests by weakening the structure on which the welfare, security, and progress of our Nation depend.

What the public knows and thinks about Federal work and workers has a direct bearing on the quality and quantity of people Government can recruit and retain in the career service. We cannot expect first-rate Government to be operated by second-rate men. We cannot expect to get and keep the first-rate people we need if they hold an image of the Federal service as a second-rate work force.

In spite of its handicaps, the quality and the achievements of the Federal civil service are enormously impressive; they deserve at least as much sustained and objective attention from the public as its deficiencies get. Raising the prestige of the public service in American society presents us with a major challenge. It is a goal worthy of high-

priority interest and cooperation by public-spirited citizens—by leaders in business, the professions, communications, and, most certainly, education.

Having but recently left the academic community, I am well aware of some of the reasons why the campus may have a distorted image of the Federal service. High among the causes, of course, is the limited opportunity for contacts between members of the college and Federal communities in many locations. Happily, there has been a trend toward increasing contact between Federal people and educators in a growing number of communities throughout the country. More and more educational institutions are participating in cooperative educational programs with Federal agencies, in many cases providing extension work at Federal work sites. Much of this activity has been stimulated by the Federal Employees Training Act as more field installations of Federal agencies have begun to use this relatively new authority to provide selected employees with training and development opportunities.

There has also been a healthy trend toward increasing incidental interchange of college and Federal personnel. Many agencies now invite educators to Federal facilities to familiarize them with their programs. In many metropolitan centers where there is a concentration of Federal agencies, Government specialists are called on as guest lecturers or regular instructors at educational institutions. A growing number of educational institutions are conducting important research projects on contract, a number of Federal fellowships have been awarded to individuals on the campus, and an increasing number of educators are serving agencies as part-time consultants or as summer employees.

These trends will continue, I am sure. The manpower shortages predicted in a variety of occupations and specialties—particularly in the field of management—will force employers, private and public, in their own long-range interest to provide more development opportunities for their officials and employees. Since 90 percent of the Federal work force is scattered in communities throughout the United States, every center of higher education will have an opportunity to provide the training the employees need to fit them for their important responsibilities. It is a challenge to public service worthy of the best efforts of American educators.

With all of these activities on the increase and with the development of a greater awareness of these opportunities for frequent intercourse, the distorted image should become less of a problem than it is today.

Even now there are encouraging signs that our continuing efforts to enhance the prestige of the Federal service and attract more promising people to careers in Government have been bearing fruit. And many leaders in education, business, Government, and other fields have been making significant contributions to our educational efforts.

High Presidential interest in and regard for the career service, reflected in widely publicized statements, have contributed an important new element to our recruitment programs. The first of these public expressions was unique in that it came in President Kennedy's State of the Union Message—the first time in the recollection of veteran observers in the Nation's capital that such a reference to the Government's career corps had been included in a new President's first major address to the Congress.

"We have found [the executive branch] full of honest and useful public servants—but their capacity to act decisively at the exact time action is needed has too often been muffled," the President said. "I have pledged myself and my colleagues in the Cabinet to a continuous encouragement of initiative, responsibility, and energy in serving the public interest. * * * Let the public service be a proud and lively career. And let every man and woman who works in any area of our National Government, in any branch, at any level, be able to say with pride and honor in future years: 'I served the U.S. Government in that hour of our Nation's need.' "

Soon after his inauguration, President Kennedy addressed a message specifically to Federal career employees through the columns of the *Civil Service Journal.* It concluded with these words:

"During my fourteen years in Congress I have had an opportunity to observe and to admire the high quality of our career civil service. In meeting the grave problems confronting us at home and abroad it is my intention that the career civil service be a full partner. Together we can lead our Nation to new peaks of achievement."

Such statements, coupled with interest generated by exciting new Government programs and our intensified recruitment efforts, have helped us to harvest a bumper crop from the campus during the past year. Applications for the Federal service

entrance examination—a main gateway to careers in civil service for college-caliber people in a wide range of specialties—reached an impressive alltime high. Both the number and the percentage of those who passed the examination set new records, reflecting an improvement in quality as well as quantity of competitors. Preliminary reports indicate that our recruiters have enjoyed comparable success in filling the needs of Federal agencies for young scientists and engineers.

We view this as a great step in the right direction, but we know we have a long way to go before Federal service enjoys such high regard that the most talented graduates of our institutions of higher education automatically consider it a possible career choice. Educators can contribute much to the attainment of this important goal by helping to insure that the public service is presented in its true light and by making certain that bright young people do not overlook the challenging opportunities in Federal careers nor remain unaware of their country's urgent needs.

The President's Quality Education Bill

Included among the five legislative proposals affecting higher education made in the President's Message on Education (see March issue of Higher Education) *was a proposal to improve the quality of education. This measure has now been introduced as H.R. 10145, entitled "The Improvement of Educational Quality Act of 1962." Secretary Ribicoff of the Department of Health, Education, and Welfare explained the purpose and provisions of the bill before the Select Subcommittee on Education of the House Committee on Education and Labor at hearings held on March 1, 1962. Since the provisions of this bill are not widely known, the Secretary's statement is given here.*

I am pleased to appear today in support of H.R. 10145, introduced by Mr. Thompson, the chairman of your subcommittee. The bill, entitled "The Improvement of Educational Quality Act of 1962," carries out the recommendations of the President in his education message of February 6, 1962.

The greatest resource of this Nation is its young people who represent the leadership of the future. Fundamental to the assumption of leadership by these young people is the opportunity for an education of sufficient rigor and quality to enable them to meet the tremendous responsibilities to be placed on their shoulders. The creation of a high standard of excellence in education is essential to national survival. The day is past when even one of our classrooms should be staffed by an underpaid or undertrained teacher.

The teacher in the classroom is the basic element in the educational process, and we owe to our children as well as to our teachers the obligation of supplying every possible resource to enable the teacher to conduct a class in a professional, competent, and well-informed manner. This goal is attainable within this decade if we make the best use of all our knowledge and resources.

The bill before you is intended to bring about an improvement in the quality of education at the elementary and secondary level and to do this under the traditional structure of State and local school agencies. As President Kennedy said in his February message on education, "This tradition assures our educational system of the freedom, diversity, and the vitality necessary to serve our free society fully."

The profession of teaching is a high calling—one which should attract the finest minds and the firmest purpose. It is challenging and demanding, exciting, and rewarding; yet we find many of our most promising people turning to other professions—or leaving the teaching profession in a few short years. Those who remain—and there are tens of thousands of dedicated, able teachers who have remained—do so at the expense of financial security, professional status, and real opportunity for growth and learning.

Last year, 120,000 teachers left teaching for various reasons. Only 102,000 college graduates entered the profession. We were unable to replace with college graduates all the teachers who left. In addition, we need 35,000 teachers this year to accommo-

date the growth in student enrollment. We need an additional 30,000 to relieve overcrowded classrooms.

We have presently teaching 90,000 teachers who do not meet the State certification requirements. Many teachers today are caught between incomes which do not permit them to improve their professional qualifications on the one hand and increasing demands for better knowledge and preparation in subject areas on the other. Teachers should be able to afford to improve their knowledge as information changes and new discoveries are made.

The teacher should have recognized professional status as one of the most valuable members of the community. This is not true today. A student who graduated last year, after 4 years of college in a scientific curriculum, could start work with an average salary of $6,240 a year. If he spent the same 4 years learning to be a teacher, his starting salary would average $4,100. The average salary for all teachers with a bachelor's degree last year was $5,215; for all scientists with a bachelor's degree, $9,000.

The increasing demands for education make it essential that we attract many more people into the teaching profession, that we do everything we can to retain our present teachers, and that we help the State and local systems improve the quality of their instruction.

In 1950, our school-age population was 30.5 million; in 1960, 44 million, an increase of 13.5 million. By 1980, there will be 67.5 million school-age children, or an increase of 37 million during the 30-year period—an average of more than a million each year. These children are entitled to the best education we can give them. Because of the increasing complexity of our world, this education must be better than we had and better than we are now giving. We cannot afford less.

DISCUSSION OF BILL

Title I

Title I of H.R. 10145 is designed to improve the quality of instruction in elementary and secondary schools. There are great variations in professional preparation, knowledge of subjects taught, experience, and opportunity for professional improvement and advancement among our 1.5 million teachers. The knowledge, competence, enthusiasm, and wisdom of the classroom teacher determine the success or failure of everything attempted by our schools. Title I would authorize three practical 5-year programs—institutes, awards, and project grants—to strengthen the initial preparation of teachers and to help our teachers prepare themselves to do a better job in the classroom.

Institutes for advanced study for teachers

Section 101 of the bill would authorize the Commissioner of Education to arrange with colleges and universities for subject-matter institutes for teachers and supervisors of subjects in which he finds that there is a general need for improved quality of instruction. These institutes would be concentrated upon the subjects generally accepted as meeting college-entrance requirements. Participants would receive a stipend of $75 per week, plus $15 per week for each dependent, during the period of attendance.

These institutes would provide in other basic curriculum areas the same kind of opportunity for improvement that has been so successfully provided in mathematics, science, and foreign languages through institutes arranged by the National Science Foundation and the Office of Education. These programs have improved instruction to such an extent that the relative neglect of these subjects has been dramatically reversed in a few short years. But mathematics, science, and foreign languages do not encompass a complete educational program. Instruction in English, in history, and social sciences is essential to the attainment of the skills and knowledge required by today's youth. The requirements for subject-area competence are as important to teachers of these subjects as they are to the teachers of science and mathematics, and the intellectual disciplines and learning effort are no less.

Awards for outstanding teachers

The second program under title I is perhaps the most exciting and offers great potential for improving the quality of instruction and recognizing the great contribution to society of the many outstanding teachers now in our schools.

Section 102 of the bill would permit the Commissioner to make awards to 2,500 teachers each year to permit them to undertake a year of full-time study in the subjects they teach. The recipients would be selected by State commissions designated by the Governors. Each recipient would receive a stipend equal to his salary but not to exceed $5,000. The

college or university he attended would receive a $500 cost-of-education grant. Awards would be allotted among the States on the basis of the relative numbers of certified teachers, with no State receiving less than 10.

These awards would provide valuable recognition for outstanding teachers. As stated by President Kennedy: "Many elementary and secondary school teachers would profit from a full year of full-time study in their subject-matter fields. Very few can afford to do so. Yet the benefits of such a year could be shared by outstanding teachers with others in their schools and school systems as well as with countless students. We should begin to make such opportunities available to the elementary and secondary school teachers of this country and thereby accord to this profession the support, prestige, and recognition it deserves." We believe that the awards provided in this bill would stimulate additional private, State, and local grants for this purpose. The 12,500 teachers receiving awards under the bill during the next 5 years would, during their teaching careers, share the benefits of their study with several million students in thousands of schools across the Nation and thus help to raise the quality of education.

Project grants to strengthen teacher preparation programs

The first two programs, which I have just described, are designed to improve the quality of instruction by giving opportunities for professional improvement to teachers already in the profession. The third program would attack the problem of assuring a continuous entry into the profession of qualified, well-prepared teachers and would make it possible for our colleges to attract into teacher-preparation programs students showing promise and intellectual capacity.

Section 103 of the bill authorizes the Commissioner to make grants to colleges and universities for projects to strengthen their programs of teacher education. With today's emphasis on excellence in education and subject-area competence, many institutions that prepare teachers find themselves unprepared to meet the challenge. Institutions which traditionally emphasized teaching now find it necessary to provide facilities and instruction in subject areas which require additional faculty and library facilities and new curriculums to prepare teacher candidates properly.

As these institutions seek out new faculty and new programs, most of them need to strengthen their library programs. More than half of the 4-year academic institutions in the Nation today have library collections of less than 50,000 volumes. The Federal grant would cover part of the cost of improving course content and curriculum (including related improvements in library resources), better student teaching activities, and improved standards for selection of teaching candidates and for their continuation in teacher-education programs. Without financial help, most colleges will not have the resources available to make necessary improvements.

We believe that there is a direct relationship between the quality and intellectual content of teacher education and the quality of students attracted to a career in teaching. There is evidence that teaching as a profession is not attracting a proportionate share of our most able college students and that many able and dedicated teachers suffer from inadequate academic preparation. While we recognize that inadequate salaries for teachers are a major factor in this situation, we believe that improvements in teacher education can significantly improve the status of the profession. This proposal would encourage and help colleges and universities to make desired improvements.

Title II

Title II is concerned with the broad application of improved instructional practices in elementary and secondary schools. American industry spends billions of dollars each year in reaserch and development and in the application of new knowledge to technology. Although the needs of education and industry differ substantially, it is alarming that less than one-half of 1 percent of educational expenditures are for research and development. Moreover, the widespread application of the findings of educational research has been painfully slow.

Grants to States

Title II would authorize the appropriation of $50 million for each of 5 years for grants to State education agencies to help finance pilot, demonstration, or experimental projects, designed by local school districts. These projects would help greatly to improve the quality and effectiveness of instruction in public elementary and secondary schools.

The bill suggests as examples, seven broad types

of programs suitable for projects, such as: Improved course content and curriculum, special attention for gifted or deprived or disadvantaged students, and the development of new types of instruction or programing, and the most effective use of modern equipment and materials. Each project could include the acquisition of related library and other materials and equipment.

The appropriated funds would be allotted to the States on the basis of their relative populations. Ten percent of a State's allotment could be used to expand and improve the State educational agency's supervisory, research, and development services so necessary to the improvement of local school programs.

Let me cite some possible applications of this title which local educational agencies could develop:

1. Experimental programs for highly gifted pupils, making use of such innovations as seminars, adaptations of the tutorial system, and organized acceleration in courses or subjects.

2. Projects for pupils having special language or adjustment problems, with development of materials and improved methods of teaching English to non-English-speaking pupils.

3. Improvement of school library programs. Only 20,000 of our 60,000 elementary schools have libraries, and many of these are inadequate. If we are to improve the quality of education in America, we must improve school libraries.

4. Development of an intensified English language program in elementary and secondary schools, with increasing emphasis on English composition from grade 7 through 12. Full command of the English language is essential to the successful pursuit of all academic disciplines.

Amendments to Cooperative Research Act

Title II also amends the Cooperative Research Act to give a new and vital dimension to educational research and development. The amended act would authorize grants to colleges, universities, and other nonprofit organizations to pay part of the costs of centers for research, development evaluation, and demonstration of improved instructional practices and materials in the schools, where appropriate centers would be conducted in cooperation with State and local educational agencies. We believe that this expanded research and development activity, together with the special project grants described above, would be a most effective means of bringing about widespread application of better practices in education.

CONCLUSION

We estimate that appropriations for this bill would be $120 million for the first year, ranging up to $165 million in the fifth year. This is a modest cost in terms of the far-reaching objectives of the bill.

Each provision of H.R. 10145 complements the others and is also related to existing public and private programs in education. The bill pinpoints the basic requirements for improving the quality of education and proposes an effective means of meeting these requirements.

Let me emphasize that this bill is not a substitute for any other education proposal of this administration. We have made a number of proposals, all of which are of great importance. We earnestly support a broad program of funds for school construction and teachers' salaries. We want support for our colleges and college students. We want aid to the medical schools and their students. We want to do something about adult illiteracy. And in this bill I present to you today, we are seeking a fifth part of the President's education program—a measure to improve the quality of education in this country.

All parts of this program are important. The measure before you today is among the least expensive of the proposals, but I deeply believe that its ultimate impact can be as significant as anything we have proposed. It represents a new and needed approach: An effort to do something for our teachers and for the quality of teaching in our schools.

Mr. Chairman, millions of the children in our Nation have only a theoretical chance to acquire an education commensurate with their potential ability and to lead useful and happy lives. Many come to our schools from a social and cultural environment in which the desire for knowledge was never kindled. Many others of high ability and motivation do not find intellectual challenge in the school and become bored, dispirited, and even delinquent.

To help correct these conditions in the schools—to create a desire for knowledge where it never existed and to engage the best ability of every student—requires extraordinary effort by skilled

administrators, teachers, and counselors. All too often, our schools are unable to accomplish these objectives.

Recently, I had the opportunity to visit a school in New York City in which these problems are being overcome through a special program called "Higher Horizons." The children are given special remedial instruction to overcome language and academic deficiencies. They are introduced to the world of art and culture. They have the benefit of skilled teachers and counselors. Academic standards are high. These students are above average in their neat appearance, behavior, and desire for intellectual achievement. Yet, these youngsters come from an an environment characterized by unemployment, broken homes, delinquency, illiteracy, violent crime, and cultural poverty. In a very real sense, their school is saving their lives.

This contribution to our society is beyond measure. It can be duplicated in thousands of schools, serving every kind of area with respect to the whole range of educational needs.

The purpose of this bill is to launch a concerted national effort to assure that our schools offer a real opportunity for a first-class education for all our children. Federal action can be decisive in stimulating State and local leadership and accelerating progress in education.

While we cannot command intellectual excellence, we can and must encourage it in every appropriate way. H.R. 10145 provides an appropriate way to do this, and I strongly urge that it be enacted.

Office of Education Studies and Surveys

Faculty Salaries in 1961–62

THE AVERAGE SALARY of faculty members at all public and private colleges and universities for academic year 1961–62 is $7,400. The average varies considerably by type of institution:

4-year institutions	$7,495
Junior and other 2-year colleges	6,730
Public institutions, 4-year and 2-year combined	7,715
Private institutions, 4-year and 2-year combined	6,915
4-year public	7,819
4-year private	7,038

These figures are estimated adjusted averages of salaries at all U.S. colleges and universities. They were obtained by combining data from 1,486 institutions that responded to an Office survey with data from a followup of a representative sample of the institutions that did not respond. (The sample data were expanded to represent the nonrespondent group.) The adjusted salary figures are about 2 percent lower than the unadjusted figures. This 2-percent difference is, however, to be expected, since the nonrespondent institutions are generally smaller and generally pay lower salaries.

Although the 1960–61 and 1961–62 data are not strictly comparable (1960–61 data represent 1,458 institutions), the 1961–62 data show that salaries have increased slightly.

Average faculty salaries range from a low of $5,201 to a high of $10,465—a difference of $5,264. These are the average adjusted salaries by faculty rank in public and private 4-year institutions: Professors—$10,465, and $9,586; associate professors—$8,203 and $7,428; assistant professors—$6,932 and $6,241; and instructors—$5,720 and $5,201.

College and university officials in eight selected administrative positions, by rank, earn average salaries as follows: President—$14,165; director of development—$10,585; chief business officer—$9,518; chief student personnel officer—$8,475; director of public relations—$7,947; director of library—$7,915; purchasing agent—$6,983; and alumni secretary—$6,983. The average salaries of administrators are generally higher in public (4-year and 2-year) than in private institutions.

The complete report, *Salaries of College and University Professors and Administrative Personnel*, now in preparation, analyzes faculty and administrator salaries by type, size, and level (4-year and 2-year) of institution. A companion report on tuition and fees, room and board is also in preparation. Both reports should be ready for distribution by late spring and will be announced under "New Publications" in *Higher Education*.

The Division of Higher Education is distributing

data sheets as components of the College and University Finance Series. The first sheet, "Salaries, Tuition, Room and Board Charges in Land-Grant Institutions," is ready for distribution. Persons interested in receiving copies should write to W. Robert Bokelman, Division of Higher Education.

Graduate Programs in Mathematics

FROM TWO RECENT SURVEYS, a prospective graduate student in mathematics can get a picture of the financial assistance available from colleges and universities having graduate programs in mathematics, program requirements, particular areas of concentration, and other material which would help him make an informed choice of the department in which he wishes to study. This information is available in "Assistantships and Fellowships in Mathematics in 1962–63," the third annual special issue of *NOTICES* (December 1961) published by the American Mathematical Society.

A part of the Special Issue is devoted to "Graduate Degree Programs in Mathematics: 1961," written by Clarence B. Lindquist, Specialist for Mathematics and Physical Sciences, Division of Higher Education, Office of Education. Dr. Lindquist presents information in tabular form on both master's and doctoral programs in mathematics and on both master's and doctoral programs specially designed for the teaching of mathematics and a list of high speed digital computers on the campuses of 158 colleges and universities.

Dr. Lindquist derived his data from a comprehensive "Survey of Mathematics Programs in Institutions Granting Bachelor and Higher Degrees," which he conducted in the winter and spring of 1961. An Office of Education bulletin reporting the findings of this survey is in preparation.

Persons interested in the Special Issue of *NOTICES* (Vol. 8, No. 7, Part II, No. 59, December 1961) should write to: The American Mathematical Society, 190 Hope Street, Providence 6, Rhode Island. A small charge is made for each copy.

National Defense Education Act Notes

Support for Language and Area Centers Announced

THE Office of Education will allocate $2,110,000 in matching funds to 33 colleges and universities to assist them in strengthening instruction at 53 National Defense language and area centers during the 1962–63 academic year. This will be the fourth year the Office has supported language and area study programs. All but one of these centers are receiving support during the current academic year, 46 received support in 1960–61, and 19 received support in 1959–60. Federal funds allocated over the 4-year period will total $6,035,660.

Federal funds for 1962–63 will be used primarily to employ faculty, and to help bring noted foreign scholars to this country to teach at the centers. The funds are earmarked for improving instruction in 52 languages, although the largest portion of them will support instruction in the 6 languages originally designated as requiring first priority in development: Arabic, Chinese, Hindi-Urdu, Japanese, Portuguese, and Russian. An additional 18 languages are being offered at these centers, but Federal funds are not being used specifically for the support of instruction in these additional languages.

For 1962–63, Federal funds are to be distributed by world regions as follows:

Field	*Number of centers*	*Funds obligated*	*Percent of total funds*
East Asian	11	$335,295	16
Southeast Asian	3	128,069	6
South Asian	6	308,094	15
Middle Eastern	8	317,044	15
Slavic	10	444,094	21
East Asian and Slavic	2	102,910	5
Latin American	7	312,265	15
Uralic-Altaic	2	49,758	2
African	4	112,471	5
Total:	53	$2,110,000	100

Support for instruction in Latin American Spanish and area studies was provided for the first time at five of the Latin American centers during the spring semester of 1961 after Commissioner McMurrin had added Spanish to the list of six languages requiring

priority development. The other two Latin American centers in Portuguese had been supported in previous years. These seven centers are part of the Latin American studies program which the Commissioner established last year in response to President Kennedy's call for an "alliance for progress."

In addition to supporting centers during the next academic year, the Office of Education has allocated about $80,000 to 13 centers for special summer 1962 programs of instruction in 22 languages. This is the first time that additional Federal support of this size has been given to centers for specially designed summer intensive language programs.

Coursework will be given in area studies, but the emphasis will be on language instruction, chiefly at the introductory level. Though intended principally for graduate students, the language courses will be open to undergraduate and nondegree students. Expected enrollment is in the neighborhood of 500.

Except for support in Polish and Russian, these summer programs are in languages spoken in the Near and Middle East and in Southeast, South, and East Asia. A summer program in African languages will be given at Michigan State University.

Modern Foreign Language Fellowships Awarded

The Office of Education has awarded 1,011 fellowships to graduate students for the study of modern foreign languages and related area studies. The awards, authorized by the title VI language development program of the National Defense Education Act, are for study in the summer of 1962, the 1962–63 academic year, or both. Students receiving the awards are preparing for college teaching, for Government service, or for service in a nonprofit, nonsectarian organization. The fellows, who will study at 58 graduate schools, have been selected from among 2,560 applicants.

Of the 1,011 awards, about 500 are being made to students who received National Defense foreign language fellowships in 1 or more of the 3 previous years.

A total of 744 awards are in the 7 languages which the Commissioner has designated as of critical importance and of the first priority in need of development at U.S. colleges and universities—Arabic, Chinese, Hindi-Urdu, Japanese, Portuguese, Russian, and Spanish. The remaining 267 awards are in 50 other languages. Distribution of awards is as follows:

Arabic	102	Russian	161
Chinese	129	Spanish	99
Hindi-Urdu	77	Other	267
Japanese	97		
Portuguese	79	Total	1,011

Following President Kennedy's announcement of the Alliance for Progress last July the Commissioner designated Spanish a first priority language. Previously students of Spanish had not been eligible for fellowships. Other Latin American languages besides Spanish and Portuguese for which fellowships have been awarded include: Quechua, an important Amerindian language spoken by several million people in Colombia, Ecuador, Peru, Bolivia, and other South American countries; and Maya, Nahuatl, Mixtec, and Chinantec, which are Amerindian languages spoken in Mexico and parts of Central America. These fellowships are being administered as part of the Latin American studies program, which has also arranged for four title VI institutes for secondary school teachers to be conducted this summer in Latin American countries, for five new language and area centers to be supported at U.S. colleges and universities in 1962–63, and for language research and studies projects.

Another encouraging feature of the program is the growth of both institutional and student interest in the languages of Sub-Saharan Africa. Whereas in 1961–62 only 23 fellowships were awarded in these languages, 43 will be offered in 1962–63. Fellowships in Swahili, which is spoken widely in East Africa, account for 23 of this total.

Universities throughout the United States have cooperated in the fellowship program by developing fellowship committees which announced the program, advised candidates, and received and submitted applications, with recommendations, to the Office of Education. A panel of 33 language specialists from colleges, universities, and Government agencies which make heavy use of persons trained in modern languages reviewed the 3,143 applications and made recommendations to the Commissioner.

Amount of the academic year awards covers tuition and required fees and includes $2,250 for basic maintenance, $600 for each dependent, and allowances for travel to and from the fellow's institution. The basic maintenance for summer fellows is $450 for 8 weeks and $120 per dependent for 8 weeks.

Study Completed on Resources of Language and Area Centers

A STUDY of the resources and practices at 46 language and area centers supported in 1960–61 on 30 campuses under title VI was conducted last year by the American Council on Education (ACE) under contract with the Office of Education. The results of this study have been incorporated in a book by Joseph Axelrod, professor of humanities at San Francisco State College, and Donald N. Bigelow, formerly of the history faculty at Columbia University and now with the Office of Education, recently published by the ACE under the title *Resources for Language and Area Study*. (Copies are for sale by the American Council on Education, Washington 6, D.C.)

The findings of the study show that, while the language and area centers program has helped to support existing language and area center programs, most of this support has been devoted to new and wider activities: The inclusion of intensive language courses in the place of nonintensive courses; the expansion of course offerings in area studies and encouragement of recruitment of experts in relevant area disciplines such as history, the behavioral sciences, and the humanities; the development of advanced language and area study courses where they had not been previously offered; and the expansion of the center activities to include other languages of the various major regions of the world not commonly taught in U.S. institutions.

The consequence of this expansion has been to make the centers more flexible and permit them to meet the needs of a wider variety of students, whether they are preparing for college teaching, Government service, or careers in industry or business. In expanding the centers, the Office of Education has attempted to bring about a more even balance between language and area work.

Several of the universities now receiving support had previously possessed only the nucleus of a center. Without the support afforded by the centers program they would not have been able to expand their language and area activities. Centers are expensive operations, and in many institutions enrollments had not been large enough to justify unaided expansion by the university. But whether the center was already well established or whether it was merely the nucleus of a center, it has been left to the university to decide in what directions the center for which the support was given should grow. Each university has worked out the pattern of expansion best suited to its academic and administrative framework and most in accord with its own view of the development it desired. As Logan Wilson, president of the ACE, says in his foreword to the report, "The Federal Government has provided its share of the financing of language and area centers without impairing the autonomy of the institutions receiving the funds; in short, Federal funds have been given without Federal control."

Most of the support being given for the language

National Defense Language and Area Centers, 1962–63

University of Arizona: Oriental Studies.
University of California.
Berkeley: South Asian; East European.
Los Angeles: African; Latin American; Near Eastern.
University of Chicago: Far Eastern; South Asian.
University of Colorado: Slavic and East European.
Columbia University. Latin American; Soviet and East European; East Asian; Uralic-Altaic.
Cornell University: South Asian; Southeast Asian; East Asian.
Duquesne University: African.
University of Florida: Latin American.
Fordham University: Russian.
Harvard University: East Asian; Middle Eastern; Slavic.
University of Hawaii: Chinese, Japanese, and Korean; Indonesian, Javanese, and Thai.
Howard University: African.
University of Illinois: Russian.
Indiana University: Slavic; Uralic-Altaic.
State University of Iowa: Chinese.
Johns Hopkins University, School of Advanced International Studies: Middle Eastern.
University of Kansas: East Asian.
University of Michigan: Far Eastern; Near Eastern; Slavic.
Michigan State University: African.
New York University: Portuguese.
University of Pennsylvania: South Asian; Slavic.
University of Pittsburgh: Chinese.
Portland State College: Middle Eastern.
Princeton University: Near Eastern.
University of Southern California: Soviet-Asian.
Stanford University: Chinese-Japanese.
University of Texas: South Asian; Middle Eastern; Latin American.
Tulane University: Latin American.
University of Utah: Middle Eastern.
Vanderbilt University: Russian.
University of Washington: Far Eastern and Russian.
University of Wisconsin: South Asian; Latin American.
Yale University: Southeast Asian.

and area centers is for instruction of graduate students because most work in the uncommonly taught languages is being carried on at the graduate level and because over the long run undergraduate programs can be best strengthened and developed by initial support of graduate programs which produce college teachers.

Salient statistical findings of the report for the academic year 1960–61 are:

- The 46 centers offered over 1,200 courses; 550 of them were in some 40 languages and enrolled almost 7,000 students; the others were in area studies.
- Faculty totaled 600, 305 teaching language and 308 teaching area studies (13 of the 600 were teaching in both).
- Size of the centers ranged from 4 to 700 students enrolled in language courses.
- 1,400 graduate students enrolled in these centers were earning advanced degrees or certificates. Of these, 600 were studying under a scholarship or fellowship awarded them specifically to do graduate work in language and area studies.
- 469 undergraduates were studying for their B.A. degree as majors or minors in language or area study (or both). Over half were at East Asian centers and over a fourth at Slavic and East European centers.

Other Program Notes

Acting Associate Commissioners Named

COMMISSIONER Sterling M. McMurrin has announced the appointment of three Associate Commissioners and their deputies to serve as acting heads of bureaus recently established in the Office of Education (see *Higher Education*, March 1962, pp. 14–15).

Ralph C. M. Flynt, formerly Assistant Commissioner of the Division of Statistics and Research Services, will head the Bureau of Educational Research and Development. The Deputy Associate Commissioner will be E. Glenn Featherston, who was Assistant Commissioner of the former Division of State and Local School Systems.

Oliver J. Caldwell, who has been Assistant Commissioner for International Education, will be the new Associate Commissioner for the Bureau of International Education. His deputy will be Thomas E. Cotner, former Director of the Educational Exchange and Training Branch.

Arthur L. Harris, previously Director of the Office of Field Services, becomes Associate Commissioner of the Bureau of Educational Assistance Programs. John R. Ludington, formerly Director of the Aid to State and Local Schools Branch, which administers titles III and V–A of the National Defense Education Act, has been named Deputy Associate Commissioner.

Other appointments announced by the Commissioner include Peter P. Muirhead, Assistant Commissioner and Director, Office of Program and Legislative Planning; John F. Hughes, Executive Officer and Director, Office of Administration; Carroll Hanson, Director, Office of Information. Walker F. Agnew will succeed Arthur L. Harris as Director of the Office of Field Services.

Directors of the 11 divisions organized within the 3 bureaus will be announced in the near future.

NIH Budget Request Totals $780.4 Million

THE National Institutes of Health (NIH) have requested $780.4 million for fiscal year 1963, an increase of $103.9 million over funds made available during the current fiscal year. Of the total, $636.8 million is for grants and related contracts for research, fellowships, training, State control programs and community demonstration projects, an increase of $93.8 million. For direct operations, including research, collaborative projects, review and approval of grants, and administration, the request is for $143.9 million, an increase of $10 million.

Funds requested for fellowships total $25.9 million, for training $119.7 million, and for grants $471.8 million. Almost all of these funds would go to institutions of higher education. Based on ex-

perience with the fiscal year 1961 appropriation, the latest year for which figures are available, about 3,100 full-time and 1,100 part-time fellowship awards would be made in fiscal year 1963. Training grants would support over 7,000 students and traineeships about 300 students. Funds for traineeships are almost all for study of arthritis and neurology. About 14,000 projects will be undertaken at some 1,000 colleges and universities with the support of NIH grants.

Seven Universities Combine To Train Peace Corps Volunteers

SEVEN UNIVERSITIES in the Greater Washington Area will pool their resources to assist the Peace Corps in training Volunteers. They are American University, Johns Hopkins University School of Advanced International Studies, George Washington University, Catholic University, Howard University, Georgetown University, and the University of Maryland. This is the first time these universities have conducted a joint educational program.

Representatives from each institution and from the Peace Corps make up the Inter-University Peace Corps Policy Board. The board, which will act as a central agency for planning and mounting Peace Corps training programs in the Washington area, will give the Peace Corps access to the combined faculties and facilities of the seven participating institutions. Chairman of the board is Ernest O. Griffith, dean of the School of International Service at American University. The universities will train several hundred Volunteers this summer for a variety of projects in several countries.

NSF Awards Fellowships

THE National Science Foundation has awarded 1,760 graduate fellowships to students of science, mathematics, and engineering, 185 postdoctoral fellowships for advanced study and research in the sciences, and 300 summer fellowships for secondary school teachers of science and mathematics. These are three of seven fellowship programs administered by the Foundation.

The 1,760 graduate fellows were selected from among 5,961 applicants, all of whom were required to take examinations for scientific aptitude and achievement administered by the Education Testing Service, Princeton, N.J. Panels of outstanding scientists nominated candidates for awards after considering their test scores, academic records, and recommendations. Of the awards, 403 are in the life sciences, 1,281 in the physical sciences, and 76 in the social sciences. Basic stipends are $1,800 for the first-year graduate student, $2,000 for the second-year student, and $2,200 for the terminal-year student. Allowances of $500 a year for each dependent and a limited travel allowance are available, and a cost-of-education allowance of $500 and the amount of the tuition and fees for each fellow are paid to the institution.

The 185 postdoctoral fellows will study at 31 U.S. and 48 oversea institutions. The fellowships, from 6 to 24 months in duration, give $5,000 for the first 12 months and $5,500 for the second 12 months, plus special 12-month allowances of $300 to cover tuition, fees, equipment, and special travel, and $500 for each dependent. Both the postdoctoral fellowship and the graduate fellowship programs will begin their 11th year of operation in 1962–63.

The 300 summer fellowships for secondary school teachers of science and mathematics will go to 46 States, the District of Columbia, and Puerto Rico. Of the total, 261 are for 2 or 3 successive summers of training, and 39 for 1 summer only. First offered in 1959, this program is specially designed to meet the training needs of teachers of mathematics and science. Of the awards, 152 are in mathematics, 94 in the life sciences, 51 in the physical sciences, and 3 in general science. The Foundation pays the cost of tuition and fees and gives the fellow a stipend of $75 a week, plus travel and dependency allowances.

Division of College and University Assistance

The title of the Division of Institutional Grants, originally assigned to the former Financial Aid Branch under the recent reorganization of the Office of Education (see HIGHER EDUCATION, March 1962), has been changed to Division of College and University Assistance. This Division administers the four higher education programs of the National Defense Education Act and is in the Bureau of Educational Assistance Programs.

NSF Announces Grants for Summer Conferences

THE National Science Foundation has granted approximately $405,000 to colleges and universities for the support of 25 summer conferences for college teachers of science, mathematics, and engineering.

These conferences will provide an opportunity to about 690 teachers to strengthen their knowledge of new developments in science and mathematics. The summer 1962 program will include specialized topics in biology, chemistry, computer science and programing, engineering, geology, geophysics, mathematics, and physics.

The conferences, which will last up to 4 weeks, are scheduled for the convenience of college staff members who must teach during summer terms.

Participants, who will be selected by the conference directors and not by NSF, will receive stipends of up to $15 a day plus travel allowances and will attend the conferences without charge.

English Centers Established

Three Curriculum Study Centers in English began operation this month with funds made available through Project English in the Office of Education. They are at Carnegie Institute of Technology, the University of Nebraska, and Northwestern University.

The centers, which are designed to improve the curriculum in English on all educational levels, will cost $720,000 over a 5-year period. The Nebraska and Northwestern centers will operate for 5 years at a cost of $250,000 each, and the Carnegie center will operate for a little over 4 years at a cost of $220,000. The participating institutions, as well as public schools in their areas, are also contributing funds for the operation of the centers.

The principal effort of the centers will be to experiment with the development of curriculums that will help students learn English more systematically. This will be done by a meaningful ordering of course content and a consideration of the students' learning processes. The teaching materials they develop will be tested in elementary and secondary schools and in beginning college English classes.

The Carnegie center will stress English for college-bound students in grades 10, 11, and 12. The Northwestern center will emphasize sequence in composition for all students in grades 7 through 14. Nebraska will also stress sequence in composition but will cover all the years from kindergarten through the freshman year of college. Preliminary work on such a program has already been carried on at Nebraska under a grant from the Woods Foundation.

The tested instructional materials to be developed by the centers will be made available to schools and colleges, and a series of reports on the findings of the centers will be submitted to the Office of Education.

Federal Funds for Research and Development

THE CONGRESS appropriated $10.8 billion to Federal agencies for research and development during fiscal year 1962: About $3 billion for research, $6.7 billion for development, $1 billion for facilities, and $0.1 billion for information. The total for 1962 is $1 billion more than in 1961 and nearly 18 times the total in 1947. Except for a decline in 1954 and 1955, these obligations have risen steadily throughout the 15-year period.

Federal obligations for research and development, by agency, fiscal year 1962 (estimated)

(Millions of dollars)

Total	[1] 9,534.8
Department of Defense	6,211.0
National Aeronautics and Space Administration	1,390.0
Atomic Energy Commission	879.4
Department of Health, Education, and Welfare	513.0
Department of Agriculture	154.0
National Science Foundation	109.6
Department of the Interior	87.0
Federal Aviation Agency	74.7
Department of Commerce	46.8
All other	69.1

[1] Estimates are based on requested amounts included in The Budget, 1962; hence, they do not reflect congressional action, which increased the total for research and development (excluding R&D plant) to $9.8 billion.

Note: Detail may not add to total because of rounding.

These data, obtained from the National Science Foundation's report of its 10th annual survey, *Federal Funds for Science* (see "New Publications"), show that more than 90 percent of all Federal obligations for research and development in fiscal year 1962 will be made by four agencies. The largest amount is made by the Department of Defense, with $6.2 billion, a slight drop from its 1961 figure. The National Aeronautics and Space

Administration has the largest increase in obligations, from $0.8 billion in 1961 to $1.4 billion in 1962. The Atomic Energy Commission, now third, and the Department of Health, Education, and Welfare also show gains. Twenty-one other Federal agencies share the balance of obligations.

About three-fourths of Federal funds for research and development support work outside the Government: 61 percent for industry, 12 percent for educational institutions, and 3 percent for other nonprofit organizations. About 10 percent of the research and development funds are used for the support of federally sponsored research centers managed by industry, universities, or other nonprofit organizations.

Federal obligations for basic research are increased about 46 percent, from $969 million in 1961 to an estimated $1.4 billion in 1962. This rise is in large part the result of higher operational costs of basic research in space programs.

Summary of Federal obligations for research and development and R&D plant, fiscal years 1960, 1961, and 1962

[Millions of dollars]

Item	Actual	Estimates	
	1960	1961	1962 [1]
Total obligations for research and development and R&D plant	8,078.0	9,844.5	10,518.2
Research and development	7,549.7	9,194.9	9,534.8
Total research	1,927.1	2,294.6	2,911.6
Basic research	741.2	969.0	1,416.1
Applied research	1,185.9	1,325.6	1,495.5
Development	5,430.8	6,700.6	6,418.5
Pay and allowances of military personnel in R&D	191.9	199.7	204.7
Performers of the Government's R&D:			
Domestic: [2]			
Federal Government	1,825.9	2,064.0	2,166.6
Profit organizations, proper	4,231.8	5,361.8	5,461.9
Profit organization research centers	477.9	462.4	385.5
Educational institutions, proper	449.0	563.3	688.5
Educational institution research centers	333.8	401.0	468.0
Other nonprofit organizations, proper	113.9	152.6	177.0
Other nonprofit organization research centers	42.7	74.3	87.5
Other	13.3	14.2	15.7
Foreign	61.5	101.4	84.2
Total research, by field of science:			
Life sciences, total	515.0	674.7	769.0
Psychological sciences	38.2	41.8	50.4
Physical sciences, total	1,305.9	1,505.3	1,981.3
Social sciences	34.9	38.9	70.2
Other sciences	33.0	33.9	40.7
Basic research, by field of science:			
Life sciences, total	182.4	249.1	286.3
Psychological sciences	17.1	18.5	22.7
Physical sciences, total	533.4	690.6	1,091.8
Social sciences	8.1	10.7	15.1
Other sciences	.1	.2	.2

[1] Estimates are based on requested amounts included in The Budget, 1962; therefore, they do not reflect congressional action, which increased the total for research and development and R&D plant to $10.8 billion.

[2] United States and territories.

Note: Detail may not add to totals because of rounding.

Source: National Science Foundation.

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From the Office of Education

Education Directory 1961–1962, Part 3: Higher Education, prepared by Theresa Birch Wilkins. Washington, U.S. Government Printing Office, 1962. 217 p. 75 cents. (OE–50000–62)

Library Statistics of Colleges and Universities, 1960–61: Institutional Data, by John Carson Rather and Doris C. Holladay. Washington, U.S. Government Printing Office, 1962. 89 p. 50 cents. (OE–15023–61)

National Defense Counseling and Guidance Training Institutes: Basic Facts. Washington, U.S. Government Printing Office, 1962. 9 p. 15 cents. (OE–25002A)

Explains the general purposes of the program and answers questions most frequently asked by students, college administrators, and the general public.

National Defense Counseling and Guidance Training Institutes, Summer 1962, Academic Year 1962–63. Washington, U.S. Department of Health, Education, and Welfare, Office of Education, January 1962. 17 p. (OE–25015–63)

Lists colleges and universities which will conduct summer and academic year institutes, locations of the institutes, approximate numbers of enrollees at each, dates of operation, and names of directors, and gives general information on the program for prospective enrollees.

National Defense Language Development Program: Completed Research, Studies, and Instructional Materials: List No. 1. Washington, U.S. Department of Health, Education, and Welfare, Office of Education, February 1962. 11 p. (OE–12013)

Lists 85 studies, reports on surveys, and specialized instructional materials for the commonly and uncommonly taught languages produced under contract with the Office of Education.

National Defense Language Development Program: Research and Studies—Projects Initiated 1961. Washington, U.S. Department of Health, Education, and Welfare, Office of Education, March 1962. 27 p. (OE–12014)

A listing, with brief description in each case, of the 46 projects contracted for during the fiscal year ending June 30, 1961, for the development of specialized materials or the conduct of studies, surveys, research, and experimentation designed to improve instruction in modern foreign languages.

National Defense Language Institutes, Summer 1962, Academic Year 1962–63. Washington, U.S. Department of Health, Education, and Welfare, Office of Education, January 1962. 11 p. (OE–27011–63)

Announces colleges and universities which will conduct language institutes during these periods and gives the dates for the institutes, numbers of participants, names of directors, and general information on the program for prospective enrollees.

From Other Government Agencies

Federal Funds for Science X: Fiscal Years 1960, 1961, and 1962. Washington, U.S. Government Printing Office, 1962. 145p. 75 cents. (National Science Foundation, NSF 61–82.) See page 22.

National Science Foundation; 11th Annual Report, 1961. Washington, U.S. Government Printing Office, 1962. 325p. $1.25. (National Science Foundation, NSF 62–1.)

Women in Scientific Careers. Washington, U.S. Government Printing Office, 1961. 18 p. 20 cents. (National Science Foundation, NSF 61–50.)

A compilation of data on the training and employment of women in various scientific fields and a brief study of the factors controlling women's selection of and participation in scientific careers.

U.S. GOVERNMENT PRINTING OFFICE: 1962